DOCUMENT RESUME

ED 428 306 CG 029 122

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TITLE Social Mobility and Highly-Selective Colleges: The Effect of Social Class Background on College Involvement and Outcomes.
PUB DATE 1998-04-00
NOTE 35p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Diego, CA, April 13-17, 1998).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS College Students; Educational Benefits; *Educational Status Comparison; Graduate Study; Higher Education; National Surveys; *Outcomes of Education; *Selective Colleges; Social Background; Social Class; *Social Mobility; *Socioeconomic Status

ABSTRACT

Students from low socioeconomic status (SES) families who attend college generally are better off than their parents were, but are these students as well off as their high SES peers? The effect of attendance at an elite college on income, educational aspirations, and educational attainment for students from low SES versus high SES backgrounds is examined. The study used data from the national study of the Cooperative Institutional Research Program 1985 Freshman Survey and the 1989 and 1994 Follow-Up Surveys. The study design includes three sections: (1) descriptive data for comparisons of low and high SES; (2) logistic regression to determine variables associated with graduate school attendance; and (3) logistic regressions to explicate the interactions between variables. Low SES students who attended highly selective colleges and universities, despite their ambition and ability, had distinct patterns of investment within the college environment and different and lower levels of educational attainment and aspirations than did their high SES peers 9 years after entering college. Although low SES students were almost certainly better off economically than their families of origin, this progress did not translate into equity. Areas of future research, such as differential impact and peer selectivity, are highlighted. Appendix A is a list of variables. (Contains 6 tables and 47 references.) (EMK)

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Social Mobility and Highly-Selective Colleges: The Effect of Social Class Background on College Involvement and Outcomes.

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AERA

April, 1998

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Introduction

There is a deeply held American belief that a college education results in social mobility, and many studies have shown that intergenerational mobility is indeed linked to higher educational achievement (Blau and Duncan, 1967; Pascarella and Terenzini, 1991; Blau, Duncan, and Tyree, 1994; Corcoran, 1995). That is, students from low socioeconomic (SES) backgrounds who go to college are better off than their parents were. A less frequently used comparison is comparing the outcomes of low-SES students to those of their high-SES peers. Similar low-SES and high-SES students should have equivalent outcomes, such as income and educational attainment, if our educational system is equitable.

However, recent research has shown that income, educational attainment, and educational aspirations for students from low-SES backgrounds are lower than their high-SES peers nine years after college entry for all four-year institutions (Walpole, 1997). So while low-SES students who attend four-year colleges and universities are better off than their parents, they do not reach socioeconomic levels similar to those of their high-SES peers. These findings come at a time when the impact of income and socioeconomic status on educational policy has increased due to the attack on preferences based on race and gender.

Research has also shown that low-SES and high-SES students attend different types of institutions. Students from high-SES backgrounds are more likely to attend very selective institutions than low-SES students (Astin, 1993). These highly selective institutions have been shown to promote outcomes of highly paid positions or entrance to prestigious graduate schools (Hoffnung and Sack, 1981; Domhoff, 1983; Useem and Karabel, 1986; Kingston and Lewis, 1990; Kingston and Smart, 1990). Perhaps outcomes would be more equitable for low-SES students if they attended these elite institutions. In response, this longitudinal study investigates the impact of elite college

attendance on income, educational aspirations, and educational attainment for students from low-SES backgrounds compared to those from high-SES backgrounds.

Literature Review and Theoretical Framework

As a group, prior to college, students from low-SES backgrounds have lower educational aspirations, persistence rates, and educational attainment than do their peers from high-SES backgrounds (DiMaggio and Mohr, 1985; MacLeod, 1987; Hassan and Reynolds, 1988; Pascarella and Terenzini, 1991; Astin, 1993; Lareau, 1993). The differences begin at a young age, are cumulative, result from many forces including individual agency, and are shaped by SES differences such as parental interaction styles and expectations, school structure, and school experiences and expectations (Astin, 1984, 1985, 1993; Halle, 1984; Cookson and Persell, 1985; Gaskell, 1985; Lareau, 1987, 1993; MacLeod, 1987; Kozol, 1991; McDonough, 1997).

Parental expectations and definitions of success vary with social status as well, and mediate student aspirations. Although low-SES parents often want a better life for their children, they are more likely to view a high-school diploma as the norm than are high-SES parents, to whom a bachelor's or advanced degree is considered the norm for children (Rubin, 1976; Willis, 1977; MacLeod, 1987; Lareau, 1987, 1993). Low-SES parents are also more likely to define success as a secure, full-time job after graduating from high school, with no firm expectation of college attendance for their youngsters (Rubin, 1976, Lareau, 1987, 1993). College attendance to these parents often means enrolling in a community college or technical school (Rubin, 1976). For high-SES parents, the definition of success for their children is tightly tied to four years of college attendance, and more recently, attendance at a "good" college (Rubin, 1976; Lareau, 1987, 1993; McDonough, 1997).

There are, however, low-SES students that do attend college after graduating from high school, but in the four-year period following high school they are less likely to persist to a Bachelor's degree or to aspire to a graduate degree (Astin, 1975, 1993; Boatsman,

1995). One reason for this is that students from low-SES backgrounds often enroll in institutions positioned lower in the stratified higher education system instead of enrolling in institutions which have been found to positively influence students' aspirations and persistence (Karabel and Astin, 1975; Astin, 1985; Karen, 1991; Hassan and Reynolds, 1988; Astin, 1993; Boatsman, 1995). Involvement and integration in campus activities have been found to promote high student aspirations and persistence (Astin, 1984, 1993; Tinto, 1987; Pascarella and Terenzini, 1991; Boatsman, 1995), yet low-SES students at all four-year institutions were less likely to participate in student clubs and organizations or to have contact with faculty outside the classroom than were their high-SES peers (Walpole, 1996). These results suggest that low-SES students have fewer environmentally-linked inducements that raise aspirations and persistence.

Thus, low-SES students run a gauntlet of obstacles on their way to and through college, resulting in negative consequences for their educational aspirations, persistence, and attainment. The effects begin in elementary school, and continue into the college environment for the low-SES students who are, by ability and luck, able to enroll in a college or university. For those students from low-SES backgrounds who are able to persist to graduation and receive their bachelor's degree, though, questions remain including: what are their outcomes, including income, educational aspirations and educational attainments compared to their high-SES peers?

Research into the differential effect of college on low-SES students has revealed mixed and inconsistent data on income and occupational status (Watchtel, 1975; Bowles and Gintis, 1976; Jencks, et. al., 1979, Katchadourian and Boli, 1994). Other research has not adequately isolated the effects of SES and college impact (Hoffnung and Sack, 1981; Zweigenhaft, 1993; Boatsman, 1995). Watchtel (1975) and Bowles and Gintis (1976) found that college graduates from higher-SES backgrounds have higher incomes and overall socioeconomic statuses than those from low-SES backgrounds. These findings were contradicted by Jencks, et. al. (1979), who found no such differences in his work on

several different samples. New research, however, found that students from low-SES backgrounds have lower levels of income, educational aspirations and educational attainment nine years after entering four-year colleges and universities (Walpole, 1997).

Part of the reason for the lower outcomes may be due to the types of colleges and universities these students attend. Students from low-SES backgrounds attend different, and less-selective institutions than do their high-SES peers. Education in highly-selective institutions is associated with higher income, educational attainment, educational aspirations, and occupational statuses than attendance at less selective institutions (Hoffnung and Sack, 1981; Domhoff, 1983; Useem and Karabel, 1986; Kingston and Lewis, 1990; Kingston and Smart, 1990). Since entrance to the highly selective institutions is increasing in competitiveness (McDonough, 1997), students from low-SES backgrounds that do gain entrance are well qualified and highly motivated, and therefore highly likely to succeed. Although these low-SES students are highly qualified and attending institutions that facilitate highly successful outcomes, little is known about whether the low-SES students who attend these institutions achieve outcomes similar to their high-SES peers or whether there continues to be gaps in income, educational attainment and aspirations between low- and high-SES students.

Cultural Capital Framework

The reasons for the gap in outcomes between low and high-SES students at all four-year institutions were explored utilizing the work of Pierre Bourdieu (Walpole, 1997). Bourdieu (1977, 1990, 1994) uses the concepts of cultural capital and habitus to explain the ways in which individual agency combines with socially-structured opportunities and aspirations to reproduce the existing social structure. A Bourdieuian framework is significant because it incorporates socio-cultural factors and individual agency to explain the reproduction of existing social structures. In addition to economic capital, each social class possesses social and cultural capital, which parents pass on to their children as attitudes, preferences, and behaviors that are invested for social profits (Lamont and

Lareau, 1988). People from the same social class often have common perceptions of goals and strategies for attaining the social profits they desire, identified as a person's habitus (Bourdieu, 1977; McDonough, Antonio, Horvat, 1996).

Educators differentially value high-status cultural capital, rewarding the students from higher-SES backgrounds who possess this capital, thus leaving those students with low-status cultural capital at-risk for lower success rates in schools. The habitus of a student from a low-SES background would lead that student to have lower aspirations as well as predispose the student to utilize educational strategies that may not be as successful in attaining the desired social profits. Thus, the student could make choices that will result in a maintenance of their lower social position. At the same time, however, habitus has a dynamic component and an individual can adopt new elements as a result of new experiences, historical changes in the material environment, exposure to another individual's habitus, or associating with people who originate from a different habitus, all of which are possible in the college environment (Harker, 1984; Lamont and Lareau, 1988). This means that a low-SES student can learn to make different choices, choices that could facilitate social mobility. Scholars have additionally suggested that the importance of cultural capital may be greater for the upwardly mobile (DiMaggio, 1982; DiMaggio and Mohr, 1985; Zweigenhaft, 1993). Acquiring high-status cultural capital may be a prerequisite for joining the upper-class, and upwardly mobile individuals who exhibit such an acquisition may be highly rewarded in the educational system (Ibid.).

Education in this Bourdieuian framework is most useful for its conversion potential. Scholars have shown that educational decisions and choices are made within the context of one's habitus in an attempt to accumulate capital that can be converted at a future date in pursuit of educational and occupational gains (MacLeod, 1987; Lareau, 1987, 1993; McDonough, Antonio, 1996; McDonough, Antonio, Horvat, 1996). Research has shown the effects of cultural capital on aspirations, persistence and attainment at multiple locations in the educational system (DiMaggio, 1982; DiMaggio and Mohr, 1985; Gaskell, 1985;

MacLeod, 1987; Lareau, 1987, 1993; Weis, 1990; Zweigenhaft, 1993; McDonough, Antonio, 1996; McDonough, Antonio, Horvat, 1996; McDonough, 1991; Walpole, 1997). These studies provide evidence that family background and cultural capital have a significant impact on educational aspirations, persistence, and attainment from the earliest schooling experiences, through high school, to college, and extending beyond college.

McDonough, Antonio, and Horvat (1996) modeled the college-choice decision based on a student's expectations that college is simultaneously a time to reinvest previously accumulated cultural capital and a time to accumulate additional cultural capital useful for conversion in future educational and occupational attainment. Extending this model, students would be expected to continue to accumulate capital while in college to convert it into economic capital upon leaving college or to reinvest it by choosing to attend graduate school. Students from low-SES backgrounds would be expected to show different patterns of investment and conversion than those students from high-SES backgrounds, and such patterns were found in a recent study on all four-year colleges and universities (Walpole, 1997). Those patterns of investment and conversion are empirically tested for a sample of highly-selective institutions in this longitudinal study of students who entered college in 1985 by investigating the income, educational attainment, and educational aspirations nine years after college entry.

Design

This study utilized data from the national study of the Cooperative Institutional Research Program (CIRP) sponsored by the Higher Education Research Institute (HERI) at UCLA and the American Council on Education. Specifically, the study used the 1985 Freshman Survey, the 1989 Follow-Up Survey, and the 1994 Follow-Up Survey, yielding a sample of approximately 12,000 subjects that responded to all three surveys. The sample was restricted to highly-selective four year institutions, defined as having average entering SAT scores of 1200 and above. The SES in 1985 was determined using parental income, educational attainment, and occupational prestige (Nakao and Treas, 1994). The lowest

and highest quartiles were utilized as sub-samples defining students from low and high-SES backgrounds. Because the sample was restricted to highly-selective institutions, it was small and each sub-sample consisted of approximately 400 students.

The study methodology utilized three sections for analyses. The first section was descriptive information to determine the extent to which students from low-SES backgrounds' investment within the college environment differed from that of high-SES students' investment and to determine the extent to which attending a highly-selective college paid off. The questions were: What are the similarities and differences in investment patterns within the college environment, and what are their income levels, educational attainments, and educational aspirations nine years after entering college compared to those of their high-SES peers? Two and three-way crosstabulations of student college investments and outcomes comparing low-SES and high-SES students were performed and will be discussed. The college investment measures included time spent working with faculty, time spent in student clubs and groups, time spent working for pay, and college GPA. The outcome measures included 1994 income, educational attainment, educational aspirations, and graduate school attendance. To compare characteristics of the national population (to ensure the sample was representative in terms of ethnicity, drop-out status, etc.), weighted data was used in the crosstabulations, and the sample sizes (11884 for low-SES and 12860 for high-SES students) reflect the weighted data. Results of the crosstabulations are shown in Tables 1, 2, 3 and 4.

The second segment of the design utilized logistic regression to determine variables associated with graduate school attendance for all students, low-SES students, and high-SES students. Graduate school attendance was an appropriate dependent variable choice because in a Bourdieuian framework, capital accumulated in educational settings is converted to maximize social and economic profits. Attending graduate school could be viewed as both a conversion of previously accumulated capital and a reinvestment to continue capital accumulation. The majority of students in this study had converted their

undergraduate education and reinvested in graduate school by 1994. Logistic regression was an appropriate choice given that the dependent variable, graduate school attendance, was dichotomous (1- did not attend graduate school, 2- attended graduate school) (Hosmer and Lemeshow, 1989; Menard, 1995). Twenty-seven independent variables were chosen that, in a Bourdieuian framework, represented capital investment and conversion within a college environment and following college. The variables were fit to the regression in four temporally-ordered blocks: (1) input block; (2) institutional characteristics block; (3) college investment block; and (4) college conversion block (see appendix A for all variables and blocks). The blocking was utilized in order to determine the effects of a variable block after controlling for the earlier blocks. Prior to the blocks of variables, the student's 1985 degree aspirations was forced into the regression equation as a pre-test variable. Listwise deletion resulted in sample sizes of 1599 for all students, 402 for low-SES students, and 403 for high-SES students. The odds ratios for the three groups of students are shown in Table 5 for the entering independent variables.

Finally, logistic regressions were run again with graduate school attendance as the dependent variable, but in the final case every variable that had entered the equation for all students, low-SES students, or high-SES students was forced into two equations, one variable at a time in order to more accurately compare the low-SES and high-SES students and to more fully understand the interactions between variables for the two groups. Eliminating variables that did not enter the blocked variable regressions changed the sample sizes slightly, resulting in a sample of 408 for both the high and low-SES students. The odds ratios for each of the independent variables for these regression equations are shown in Table 6.

Crosstabulation Results

High and low-SES students who attended highly-selective institutions showed different patterns of investment and conversion in college and after college. Table 1 contains data on investment activities within the college environment.

Insert Table One About Here

Two-way crosstabulations revealed that, overall, students from low and high-SES backgrounds worked on professors' research projects at similar rates and differed on the amount of time spent studying and working. Low-SES students spent less time studying and more time working than their high-SES counterparts, a difference that is not surprising, but also a difference that reflects different investment patterns within the college environment. Those differences in investment patterns could be one reason for the difference in students' GPAs. Not surprisingly, the low-SES students were more likely to report "B" averages and the high-SES students reported "A" or "A+" averages at higher rates. These GPAs are both a conversion of investments made within the college environment and academic capital when reinvesting in graduate school. Three-way crosstabulations highlighted that, although high and low-SES students spent similar amounts of time in student clubs and groups overall, there were differences between high and low-SES students. The high-SES students with the highest GPAs were less likely to spend time in clubs and groups than were the low-SES students with similar GPAs. The reverse is true of students lower GPAs; the high-SES students were more likely to spend time in clubs and groups and the low-SES students were less likely.

Table 2 displays graduate school degree attainment and aspirations. Although overall the majority of both high and low-SES respondents had attended graduate school by 1994, fewer low-SES students invested in graduate school than did high-SES students (59% vs. 68%).

Insert Table 2 About Here

It was also evident that low-SES students attained fewer graduate degrees, especially medical and legal degrees, than their counterparts from high-SES backgrounds. The overall rate of Ph.D./Ed.D. degree attainment was so small (<2%), it was not included in the degree earned section. The graduate degrees planned also showed differences between high and low-SES students. Students from low-SES backgrounds aspired to more Masters degrees, similar numbers of PhD's and EdD's, but fewer MD's and JD's than their high-SES peers. The aspirations of low-SES students were more long-term, however, with 27% responding that they plan on returning to school in two years or more. From all the data, then, it was evident that nine years after entering these highly selective colleges and universities, students from low-SES backgrounds have a different pattern of educational aspirations and attainment than do their peers from high-SES backgrounds.

Turning to reported incomes, overall, students from low-SES backgrounds reported incomes under $30 thousand at lower rates and incomes between $30 and $75 thousand at higher rates than did students from high-SES backgrounds, as seen in Table 3. The percentage of students reporting incomes over $75 thousand was so small (<5%), that it was not included in the analysis.

Insert Table 3 About Here

The income differences made sense given the previous findings on graduate school attendance. Since more students from high-SES backgrounds were attending graduate school and pursuing degrees with longer time commitments, it was not surprising that their incomes are smaller. Utilizing three-way crosstabulations, the incomes of low and high-SES students working full-time were more similar than were the overall incomes, although low-SES students continued to report incomes under $30 thousand at slightly lower rates and between $30 and $75 thousand at slightly higher rates than high-SES students. There

was little difference in the 1994 incomes of high and low-SES students who had attended graduate school.

The crosstabulation data, then, provided a picture of low and high-SES student investment and conversion patterns nine years after they entered college. Students make different investments within the college environment, which may then impact subsequent conversion. Although the majority of students, regardless of their SES background, converted their college degree into graduate school attendance, the conversion and re-investment patterns for students from low-SES backgrounds were different from those of their high-SES peers. Low-SES students who pursued graduate school were more likely to pursue Masters degrees and less likely to pursue MD's or JD's. They also appeared to anticipate a longer time line for achieving their educational goals. Although the income data showed students from low-SES backgrounds with some advantage in 1994, this may be a short term advantage given the differences in degree aspirations and attainment.

The patterns of degree attainment and aspirations indicated that students from high-SES backgrounds secured more graduate degrees, and, in particular, entered the legal and medical professions in higher numbers than the low-SES students. These two degrees, and subsequent training, were a greater time investment than many Master's degrees. Those who sought medical and legal degrees, disproportionately from high-SES backgrounds, may have joined the workforce later, and may have been in the workforce a shorter length of time. In light of that finding, and given that the survey was conducted only nine years after college entry, or five years after college completion (assuming these students all graduated in four years), the income differences between low and high-SES students who attended highly-selective institutions were more understandable. The low-SES students converted their education into positions in the workforce more quickly than did their high-SES peers, which could account for the low-SES students' higher incomes in 1994.

However, although medical and legal degrees were a larger time investment, their long-term conversion potential in the workplace may be greater than the potential of Master's degrees. Thus, in the future, the students from low-SES backgrounds may fall further behind their high-SES peers. From a Bourdieuian perspective, the low-SES students were displaying a different habitus than their high-SES peers. Students from high-SES backgrounds were converting the capital accumulated in college into graduate school attendance, and particular types of graduate degrees, at higher rates while students from low-SES backgrounds were converting their capital into shorter-term graduate degrees.

There was another crosstabulation result in degree aspirations that was interesting and important in understanding the regression results. The percentage of high-SES students aspiring to a Bachelor's degree actually increased significantly from 1985 to 1989, as seen in Table 4. That increase remained stable in 1994. The percentage of low-SES students showed a slight dip from 1985 to 1989, and an equivalent increase from 1989 to 1994.

Insert Table 4 About Here

Regression Results

The results of the regression equations revealed interesting data. Table five contains the regression results for the blocked equations. The first and most surprising result was that 1985 degree aspirations were not a significant predictor for any of the three groups. For the high-SES students, in fact, high aspirations in 1985 were never significant, which may be reflective of the high-SES student's increase in aspiring to a Bachelor's degree rather than a graduate degree. For all students the predictive power of degree aspirations in 1985 disappeared when 1989 degree aspirations entered the equation.

For low-SES students, 1985 degree aspirations were significant until the 1989 plan to attend graduate school entered.

Insert Table 5 About Here

The first variable to enter the equation from the input block for all students was SES, which remained a significant predictor of graduate school attendance by 1994. The other variables in the input block that were significant for all students were the SAT math score and being female. None of the input variables were significant for the low-SES students. For high-SES students, SAT math scores were a significant predictor. For all students and high-SES students, the SAT verbal score also entered the equation. The predictive power disappeared for both when peer SES entered, meaning students with high SAT verbal scores were more likely to attend a college or university with a high peer SES.

In the institutional characteristics block, peer SES entered the equation for all three groups and remained a significant predictor of graduate school attendance for high-SES students. For all students and low-SES students, the predictive power of peer SES disappeared when the 1989 degree aspirations entered. For all students and low-SES students, then, having a high peer SES, in addition to attending a highly-selective college, converted to higher degree aspirations in 1989. For the high-SES students, attending a highly-selective institution, which then also had a high peer SES, directly increased the probability of attending graduate school. Perhaps having a peer group from high-SES backgrounds, for high-SES students, reinforced the habitus that views graduate education as a reinvestment toward further capital accumulation. While, for low-SES students, a high peer SES group may have provided a milieu which promoted high degree aspirations.

Overall, in the college investment block, five variables entered for any of the groups: worked on a professor's research project, worked full-time while in college, hours per week spent studying, hours per week spent in student clubs and groups and college

GPA. College GPA was the only variable that entered for all three groups, and it was a significant predictor for all students and the low-SES students. Three additional variables entered for all students and low-SES students. For all students, the predictive power of working on a professor's research disappeared when degree aspirations in 1989 entered the equation, and, for low-SES students, working on a professor's research was significant until the 1989 plan to attend graduate school entered. So for all students, working on a research project converted directly to higher degree aspirations, while for low-SES students, being involved in a professor's research converted directly to a plan to attend graduate school in 1989. Having worked full-time in college significantly decreased the likelihood of attending graduate school for all and low-SES students. The hours per week spent studying significantly predicted graduate school attendance for both all students and low-SES students.

For the high-SES students, the only significant variable in the college investment block was spending time in student clubs and groups, which significantly decreased the likelihood of attending graduate school by 1994. This was a particularly interesting result given the literature documenting the positive effects of student involvement. A negative correlation coefficient (-.0245) confirmed the association between time spent in student clubs and groups and graduate school attendance for high-SES students. Three-way crosstabulations also showed that the high-SES students who spent time in student clubs and groups had lower GPAs than low-SES students spending similar amounts of time, which could account for the negative association.

In the college conversion block, the 1989 plan to attend graduate school, the 1989 degree aspirations, and choosing a career for intrinsic reasons were significant predictors for all students and high-SES students. The 1989 plan to attend graduate school was highly significant for both groups. The 1989 degree aspirations were highly significant for all students and less significant for the high-SES students. Choosing a career for intrinsic reasons, that is because it is interesting, challenging, or contributes to society, had the same

level of significance ($p<.05$) for both. For low-SES students, planning to attend graduate school in 1989 and degree aspirations in 1989 entered the equation and significantly increased the probability of attending graduate school by 1994. All of these relationships in the college conversion block seem fairly straight forward and understandable.

Table six shows the regression results for low and high-SES students when forcing the entry of all variables which entered the three previous equations. The third section of the design again utilized logistic regression, but focused on comparing students from low- and high-SES backgrounds. Every variable that had entered any of the previous three blocked regression equations was forced into an equation for low-SES students and an equation for high-SES students one variable after another. This was done in order to directly compare the effect of each variable on the sub-samples of low- and high-SES students and to understand the interactions between variables that may differ between the two groups. Because of the changes in variables, the sample size for both the high and low-SES students was 408, a slight difference from the previous regressions.

Insert table 6 about here

Once again, the 1985 degree aspirations were not a significant predictor of graduate school attendance by 1994. For the low-SES students, having high aspirations in 1985 was significant when it entered the equation, but the predictive power disappeared when the 1989 plan to attend graduate school entered. So for the low-SES students, having high aspirations converted directly into the plan to attend graduate school in 1989. In contrast, results for the high-SES students indicated that high aspirations in 1985 actually slightly decreased the likelihood of graduate school attendance by 1994. This, again, may be due to the increase in the percentage of high-SES students seeking Bachelor degrees.

For low-SES students, being female significantly increased the chances of graduate school attendance by 1994, but it became significant only after the variable intrinsic career

reasons entered. So, female students from low-SES backgrounds were more likely to attend graduate school by 1994, but were less likely to choose a career for intrinsic reasons. SAT math and verbal scores were never significant for low-SES students, but they were both significant when entering for high-SES students. The SAT math score remained a significant predictor for graduate school attendance by 1994, but the verbal score lost its significance when the peer SES entered the equation.

Peer-SES was significant when it entered the equation for both high and low-SES students. For low-SES students, the predictive power disappeared when the 1989 degree aspirations entered the equation, indicating once again, that the effect of attending an institution with a high peer SES may have been to promote high degree aspirations for low-SES students, but it does not contribute directly to enabling low-SES students to convert their undergraduate education into an investment in graduate school. This conversion does seem to occur for high-SES students because peer SES remained a significant predictor of graduate school attendance by 1994. Again, this may indicate a possible reinforcement of the high-SES habitus element that views attending graduate school as a means of converting the college investment.

Working on a professor's research project, the hours per week spent studying, the hours per week spent in student clubs and groups, and college GPA were all significant when they entered the equation for high-SES students. The predictive power of working on a research project and time spent studying disappeared when college GPA entered the equation. The college GPA was significant until the 1989 plan to attend graduate school entered. For high-SES students, then, the investments of working on a professor's research project and studying converted to a higher GPA, which then converted to the plan to attend graduate school in 1989. Time spent in student clubs and groups again significantly decreased the likelihood of attending graduate school by 1994. As discussed previously, the high-SES students with higher levels of involvement in clubs and groups

had lower GPAs, which may explain this counterintuitive result. Working full-time while in college was never a significant predictor in the equation.

For the low-SES students, working on a professor's research project, working full-time while in college, the hours per week spent studying, and college GPA were all significant when they entered the equation. The hours per week spent studying and college GPA remained significant predictors of attending graduate school by 1994. Working full-time, again, significantly decreased the likelihood of attending graduate school by 1994. Working on a professor's research project was significant until the 1989 plan to attend graduate school entered the equation. Therefore, working on research appeared to convert directly to the plan of attending graduate school in 1989. Time spent in student clubs and groups was never a significant predictor for low-SES students.

The 1989 plan to attend graduate school and 1989 degree aspirations were significant when they entered the equation for both high and low-SES students, and remained significant predictors of attending graduate school by 1994. The variable intrinsic career reasons was not significant when it entered the equation for either group.

Discussion

In this study, all of the data indicated there were still significant differences based on socioeconomic status nine years after entering these highly-selective colleges. Low-SES students attending highly-selective institutions appeared to have a distinct, socially-mobile, habitus. Their investment patterns within the college environment were different than the patterns of their high-SES peers. Although the low-SES students spent equivalent amounts of time working on professors' research projects, they spent less time studying and more time working. Their GPAs were lower than the high-SES students' GPAs, however, those students from low-SES backgrounds with the highest GPAs were more likely to spend time in student clubs and groups than high-SES students with equivalent GPAs. The differential impact of involvement in student clubs and groups was interesting, and it is important that administrators within the college environment understand these

differences when encouraging student activities. Although it was not surprising to see that students from low-SES backgrounds work more while in college, the negative implications of working full-time on graduate school attendance are important and alternatives to working, such as additional financial aid should be investigated.

Overall, the majority of all students who attended these highly selective institutions had attended graduate school by 1994, which was not surprising considering the high aspirations these students had when surveyed originally in 1985. However, SES was a significant predictor of graduate school attendance overall, and the low-SES students were less likely to have attended graduate school by 1994 than their high-SES peers. Furthermore, when converting their college investment into graduate school, low-SES students appeared to choose shorter-term investments such as Master's degrees at higher rates than high-SES students, who favored medical and legal degrees at higher rates. Although the low-SES students were more likely to plan on returning to graduate school in the future, they may find it harder to do so after having been out of school for a longer period of time. So, given the longer time line that low-SES students appeared to be utilizing and their lower rates of aspiration for and attainment of medical and legal degrees, low-SES students may fall further behind their high-SES peers in the future.

For low-SES students who had attended graduate school by 1994, the elements in the college environment which increased the probability of utilizing this conversion strategy included the hours per week studying and college GPA. The finding regarding time spent studying was especially interesting given that low-SES students spent less time studying. Additionally, working on a professor's research project appeared to have the ability to convert to plans to attend graduate school directly following the undergraduate experience. Perhaps the contact with faculty members allowed the low-SES students to gain new elements of cultural capital and habitus.

In contrast, for high-SES students, the only environmental element that significantly increased the probability of attending graduate school by 1994 was having a

peer group from high-SES backgrounds. One explanation for that influence was that having such a peer group, for high-SES students, worked to reinforce a high-status habitus that views graduate education as a preferred method of conversion. This effect of peer SES occurred within highly-selective institutions, which already tend to attract students from higher socioeconomic backgrounds, so this finding may reflect variables not adequately captured in the model. The only other environmental effect for high-SES students was due to time spent in student clubs and groups, an activity which produced a significant negative effect on graduate school attendance by 1994. This variable appeared to have a very different effect for low-SES students: although it was not a significant predictor, the odds ratio was 1.07, and the correlation coefficient was positive (.1145), indicating that participating in clubs and groups was positively associated with graduate school attendance for low-SES students.

From all of the data, then, it was apparent that the social status origins of a college student continued to affect his or her experience in and outcomes of attending a highly-selective college. From a Bourdieuian perspective, these findings supported the notion that students from low-SES backgrounds possessed different cultural capitals and habiti than did other, especially high-SES, students and that attending college did not necessarily indicate that a student rose economically or socially to a level similar to his or her peers. So although many of the low-SES students were undoubtedly upwardly mobile compared to their parents, students from high-SES backgrounds continued to have an advantage.

Conclusions/ Significance

Low-SES students who attended highly selective colleges and universities, despite their ambition and ability, had distinct patterns of investment within the college environment and different and lower levels of educational attainment and aspirations than did their high-SES peers nine years after entering college. Although they were almost certainly better off economically than their families of origin, this progress did not translate into equity. This is significant because little is known about the impact of attending a

highly-selective college or university on the social mobility of low-SES students. This knowledge is important because it can inform decisions on the part of administrators, student affairs officers, and policymakers. These decisions are increasingly important because policymakers are relying more heavily on preferences based on income and socioeconomic status while banning preferences based on race and gender. The study results highlight the need for work in the educational equity arena for students from low-SES backgrounds.

Limitations/ Future Research

Further investigation of investment patterns' differential impact, such as time spent in student clubs and groups, within the college environment is one area for future research. This may be particularly important given the current research regarding the positive effects of involvement on college experiences and outcomes. Investigating the interaction between selectivity and peer SES is another area of research. A third area of future research would be to more precisely define the types of Masters degrees sought by students. Currently, a Masters degree in education, in engineering, and in business administration are all grouped in the same category. These three degrees may have very different social and economic paths which should be taken into account in investigating cultural capital and habitus. Furthermore, data on occupations and careers chosen by students is incomplete. It is important data to have on those students who had not yet attended graduate school, to understand where they are located in the social and economic structure. It is also important for understanding the careers and social positions of students with graduate degrees. Future research could also investigate what institutions these students attend for graduate school. Are they able, and do they choose, to attend highly-selective institutions uniformly, or are there differences in institution type for low and high-SES students? Incorporating data on undergraduate student borrowing and its effect on graduate school attendance rates would also be an important area to consider. Additionally, investigating the effects to less-selective institutions could be a fruitful avenue to explore. Although the

link between less-selective institutions and student outcomes is less-well established, more students attend less-selective institutions, and therefore, the results and possible effects would be important.

Table 1: College Investment Activities

Students Who Reported:	% Low-SES (n=11884)	% Hi-SES (n=12860)
Worked on Professor's Research	31	32
HPW* Studying: 3-5	13	7
HPW Studying: 16-20	18	29
HPW Working for Pay: None	16	36
HPW Working for Pay: 6-10	31	18
Worked Full Time While Student	11	2
B Average	39	26
A or A+ Average	9	22
HPW Student Clubs/Groups: 1-5	40	43
B Avg. -HPW Student Clubs: 1-5	38	54
A or A+ Avg. - HPW Student Clubs: 1-5	46	21

* Hours per week

Table 2: Crosstabulation Results of Degree Attainment and Aspirations		
Students Who Reported:	% Low-SES (n=11884)	% Hi-SES (n=12860)
Attended Graduate School	59	68
Of Those MA Highest Deg. earned '94	22	28
Of Those MD Highest Deg. earned '94	21	38
Of Those JD Highest Deg. earned '94	17	35
Of Those MA Highest Deg. planned '94	30	20
Of Those PhD Highest Deg. planned '94	23	25
Of Those MD Highest Deg. planned '94	19	37
Of Those JD Highest Deg. planned '94	19	33
Planning no return	36	51
Planning to return 2+ years	27	15

Table 3: Crosstabulation Results of Income		
Students Who Reported:	**% of Low-SES** (n=11884)	**% of Hi-SES** (n=12860)
'94 Income <$30K	47	57
'94 Income $30-75K	49	39
Work FT.- '94 Income <$30K	30	35
Work FT.- '94 Income $30-75K	64	57
Attended Grad. Sc.-'94 Income <$30K	51	51
Attended Grad. Sc.-'94 Income $30-75K	44	42

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Table 4: Degree Aspirations		
Students who Reported:	% of Low SES (n=11884)	% of Hi SES (n=12860)
1985 Highest Planned Degree-BA	10	6
1989 Highest Planned Degree-BA	8	22
1994 Highest Plannned Degree-BA	11	21

Table 5: Odds Ratios[1] for Blocked Logistic Regression DV= Attended Graduate School

Variable Name	All Students (n=1599)	Low-SES Students (n=402)	High-SES Students (n=403)
1985 Degree Aspirations	1.06* (1.17)	1.09 (.826)	1.01 (.121)
Input Block			
SAT Math	1.00* (2.30)	N/A	1.00* (2.00)
SAT Verbal	.999 (-.111)	N/A	1.00 (.217)
Sex-Female	1.32* (2.04)	N/A	N/A
SES	1.02* (2.51)	N/A	N/A
Institutional Characteristics Block			
Peer SES	1.11 (1.67)	1.26 (1.95)	1.41* (2.25)
College Investment Block			
Worked on Prof.'s Research	1.25 (1.55)	1.66 (1.68)	N/A
Worked FT while in college	.523* (-2.06)	.339* (-2.07)	N/A
'89 hpw studying	1.19** (3.72)	1.24* (2.40)	N/A
'89 hpw student clubs/grps.	N/A	N/A	.825* (-2.30)
College GPA	1.33** (3.50)	1.68** (3.38)	1.48 (1.92)
College Conversion Block			
'89 Plan to attend grad. sch.	24.88*** (9.71)	14.87*** (5.45)	43.00** (3.68)
'89 Degree aspirations	1.39*** (6.07)	1.41* (3.03)	1.38* (3.02)
Reason for career- intrinsic	1.07* (2.19)	N/A	1.16* (2.13)

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[1] Ratio of the odds of attending graduate school due to an a one-unit increase in the independent variable to the odds of not attending graduate school without that change. Numbers in parentheses indicate the ratio of the regression coefficient to its standard error. *** p<.0001. **p<.001. *p<.05

Table 6: Odds Ratios[1] for Forced Variables DV= Attended Graduate School

Variable Name	Low-SES Students (n=408)	High-SES Students (n=408)
1985 Degree Aspirations	1.11 (.959)	.997 (-.021)
SES	1.00 (.334)	1.06 (1.03)
Sex-Female	1.72* (1.97)	1.63 (1.46)
SAT Math	1.00 (.722)	1.00* (2.04)
SAT Verbal	.999 (-.157)	1.00 (.782)
Peer SES	1.25 (1.84)	1.36* (2.01)
Worked on Prof.'s Research	1.81 (1.93)	1.13 (.390)
Worked FT while in college	.312* (-2.22)	.752 (-.267)
'89 hpw studying	1.24* (2.37)	1.10 (.910)
'89 hpw student clubs/grps	1.07 (.934)	.813* (-2.47)
College GPA	1.67* (3.22)	1.24 (1.03)
'89 Plan to attend grad. sch.	15.39*** (5.47)	49.01** (3.79)
'89 Degree aspirations	1.47* (3.26)	1.39* (3.04)
Reason for career- intrinsic	.937 (-1.05)	1.14 (1.85)

[1] Ratio of the odds of attending graduate school due to an a one-unit increase in the independent variable to the odds of not attending graduate school without that change. Numbers in parentheses indicate the ratio of the regression coefficient to its standard error. *** p<.0001. **p<.001. *p<.05

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Appendix A: Variable List

Pretest Variable:

- 1985 Degree Aspirations

Input Variables:

- Race- White
- Sex- Female
- SAT Math
- SAT Verbal
- Socioeconomic Status

Institutional Characteristics Block:

- Private University
- Private College
- Peer SES

College Investment Block:

- Guest in Professor's home
- Worked on Professor's research
- Assisted Professor with teaching
- Worked full-time while in college
- Participated in intercollegiate athletics
- Attended a recital or concert
- Hours per week spent studying
- Hours per week spent talking to faculty
- Hours per week spent in student clubs or groups
- College GPA

College Conversion Block:

- 1989 Plan to attend college full-time
- 1989 Plan to attend graduate school
- 1989 Plan to work full-time
- 1989 Plan to travel
- Reason for career- intrinsic
- Reason for career- extrinsic
- Degree Earned 1989
- Degree Aspirations 1989

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